Claims

1. Multiplexer for electromagnetic radiation comprising:
a first part (253) provided with a first outward through hole (263) connectable to a source of electromagnetic radiation (203) and a first return through hole (265) connectable to a detector of electromagnetic radiation (223), wherein said first outward through hole (263) and said first return through hole (265) are spaced a distance D apart;
a second part (255) provided with a plurality of second outward though holes (273(1)-273(n)) and a plurality of second return through holes (275(1)-275(n)) wherein said second outward through holes (273(1)-273(n)) and said second return through holes (275(1)-275(n)) are arranged in equidistantly spaced apart pairs (273(1), 275(1); 273(2), 275(2);... 273(n), 275(n)) of second outward and return through holes, with each second outward hole (273(x)) at a distance D from its second return through hole (275(x)):
wherein said first part (253) is movable relative to said second part (255) from a first position P1 in which first outward through hole (263) is aligned with a second outward through hole (273(1)) and said first return through hole (265) is aligned with a second return through hole (275(1)), to a second position Px in which first outward through hole (263) is aligned with another second outward through hole (273(x)) and said first return through hole (265) is aligned with another second return through hole (275(x)).

2. Multiplexer in accordance with claim 1 characterised in that said second outward through holes (273(1)-273(n)) and said second return through holes (275(1)-275(n)) are arranged in two parallel rows.

3. Multiplexer in accordance with any of the previous claims characterised in that it is provided with an actuator (281) for moving said first part (253) relative to said second part (255).

4. Multiplexer in accordance with claim 3 characterised in that said actuator comprises a voice coil.

5. Multiplexer in accordance with claim 3 characterised in that said actuator comprises an electric motor.

6.Multiplexer in accordance with any of the previous claims characterised in that some or all of said through holes (263, 265, 273(1)-273(n), 275(1)-275(n)) are wave guides.

7. Multiplexer in accordance with any of the previous claims characterised in that the second outward through hole (273(x)) in each pair of equidistantly spaced apart pairs (273(1), 275(1); 273(2), 275(2);... 273(n), 275(n)) of second outward and return through holes, is connectable to an inlet port (209(x)) in a sample-containing unit (207(x)) and the said second return through hole (275(x)) from the same pair of second outward and return through holes (273(x), 275(x)) is connectable to an outlet port (213(x)) in the same sample-containing unit (207(x)).